

USAWC STRATEGY RESEARCH PROJECT

The Cancellation of Crusader: A Study in the Dynamics of Decision-Making

by

Colonel James L. Davis  
United States Army

Professor Len Fullenkamp  
Project Advisor

The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or any of its agencies.

**DISTRIBUTION STATEMENT A:**  
Approved for public release.  
Distribution is unlimited.

U.S. Army War College  
CARLISLE BARRACKS, PENNSYLVANIA 17013

## REPORT DOCUMENTATION PAGE

Form Approved OMB No.  
0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 07-04-2003	2. REPORT TYPE	3. DATES COVERED (FROM - TO) xx-xx-2002 to xx-xx-2003		
4. TITLE AND SUBTITLE The Cancellation of Crusader A Study in the Dynamics of Decision-Making Unclassified		5a. CONTRACT NUMBER 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Davis, James L. ; Author		5d. PROJECT NUMBER 5e. TASK NUMBER 5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army War College Carlisle Barracks Carlisle, PA17013-5050		8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME AND ADDRESS ,		10. SPONSOR/MONITOR'S ACRONYM(S)		
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT APUBLIC RELEASE				
13. SUPPLEMENTARY NOTES				
14. ABSTRACT See attached file.				
15. SUBJECT TERMS				
16. SECURITY CLASSIFICATION OF:  a. REPORT Unclassified		17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 42	19. NAME OF RESPONSIBLE PERSON Rife, Dave RifeD@awc.carlisle.army.mil
b. ABSTRACT Unclassified		19b. TELEPHONE NUMBER International Area Code Area Code Telephone Number DSN		
				Standard Form 298 (Rev. 8-98) Prescribed by ANSI Std Z39.18



## ABSTRACT

AUTHOR: Colonel James L. Davis

TITLE: The Cancellation of Crusader: A Study in the Dynamics of Decision-Making

FORMAT: Strategy Research Project

DATE: 07 April 2003 PAGES: 34 CLASSIFICATION: Unclassified

Every day key decisions are made within the United States governmental structure. It is critical, as both the Department of Defense and Department of the Army transform for the 21st century, that decisions are made using the best possible advice and input from key leaders at all levels. To an outside observer, several recent decisions were made without consulting with key Army leadership and/or devoid of valuable input. Instead, the decisions were made solely by the Department of Defense and became directive in nature. Using the Crusader artillery weapon system as an example, this study will examine the genesis of Crusader, viable options as an alternative for the replacement of the Crusader artillery system, major players in the decision-making process, the opposing views in this debate and finally how the decision was made. Reviewing this decision-making process, the study will draw conclusions as to whether the process was effective in this particular case study or the decision-making process was flawed.



## TABLE OF CONTENTS

ABSTRACT .....	III
LIST OF ILLUSTRATIONS.....	VII
THE CANCELLATION OF CRUSADER: A STUDY IN THE DYNAMICS OF DECISION-MAKING.....	1
BACKGROUND.....	2
THE GENESIS OF CRUSADER.....	3
VIABLE OPTION FOR THE FUTURE FIELD ARTILLERY?.....	4
MAJOR PLAYERS.....	8
OFFICE OF THE SECRETARY OF DEFENSE.....	9
OFFICE OF THE SECRETARY OF THE ARMY.....	10
CONGRESS AND SENATE.....	11
OPPOSING VIEWS .....	12
THE DECISION-MAKING PROCESS.....	17
CONCLUSION.....	22
ENDNOTES.....	25
BIBLIOGRAPHY .....	30



## LIST OF ILLUSTRATIONS

FIGURE 1 PALADIN.....	3
FIGURE 2 CRUSADER.....	4
FIGURE 3 PZH HOWTIZER .....	5
FIGURE 4 CRUSADER-PZH HOWITZER COMPARISON.....	6
FIGURE 5 FCS PROTOTYPE .....	6
FIGURE 6 MAJOR PLAYERS.....	9





## THE CANCELLATION OF CRUSADER: A STUDY IN THE DYNAMICS OF DECISION-MAKING

Political and military leaders must work closely, interacting on desired end states, objectives, courses of action, capabilities, and risks. Both must be masters of strategic art, and the subordination of military to civilian leadership does not lessen the importance of military counsel and advise to political authorities or the responsibilities of both to communicate and coordinate at every level of strategy and during all phases of conflict. This is the essence of strategic art.

—MG Richard A. Chilcoat

Every day key decisions are made within the United States governmental structure. The decisions are sometimes simplistic but often the decisions made have far reaching consequences that can change the structure or focus of our armed forces. Therefore, it is critical as both the Department of Defense and Department of the Army transform for the 21st Century, that decisions are made using the best possible advice and input from key leaders at all levels.

To an outside observer, several recent decisions were made without consulting with key Army leadership and/or devoid of valuable input. Instead, the decisions were made solely by the Office of the Secretary of Defense and became directive in nature, something that has been an uncommon practice in our services' history.

In hindsight, the decision whether to cancel Crusader or continue with the development of the advanced artillery system has quickly lost its original zeal. The Secretary of Defense made a conscious decision to cancel Crusader based on the administration's goals and objectives. Although the decision was unpopular, it was very much within the realm of power wielded by the Secretary of Defense. Instead of continuing this often-heated debate, this paper will focus on outlining the decision-making process to determine if this is an unsettling trend or simply the way the current administration will continue to make future decisions.

## **BACKGROUND**

As U.S. armed forces acquire ever more sophisticated equipment enabling the armor and infantry units to execute Airland Operations it became increasingly clear to all that artillery units were not keeping up. Modest improvements on the existing tracked artillery weapons systems, in the form of Paladin, were simply not capable of the speed, agility, firepower and lethality demanded by the doctrine. To remedy the perceived deficiencies, the Field Artillery community lobbied long and hard for an artillery system for the 21st Century.

Designated Crusader, this revolutionary new artillery system incorporated the best technologies in communications, armor, track vehicle design, propulsion, fire control, etc. Indeed, once all the bells and whistles were loaded on to the chassis, what had once been envisioned to be a state of art piece of hardware had in fact become a contractor's shopping cart, and an overladen one at that. At one point the road-weight of the vehicle approached 70 tons making it heavier than even the Army's main battle tank. The collapse of the Berlin Wall, dismantlement of Russia's massive armored forces, coupled with the expeditionary kinds of warfare, which characterized the last decade of the 20th Century, brought about rapid change. Therefore, the need for a heavy tracked artillery piece was no longer a certainty in the minds of those who sought to transform the armed forces of the United States from their Cold War posture into something more light, lethal, and versatile. In short, as the transformation train picked up speed, Crusader looked more and more out of place. The Crusader was thought to be too big, too expensive, and too entrenched in the legacy force.

As the competition for defense dollars increased, many in the Pentagon looked for big-ticket items that could be cut to free up dollars for use elsewhere. In the budget debate for FY2003, Secretary of Defense Donald Rumsfeld, with a stroke of his pen, lined Crusader out of the budget. In an instant, twenty years of research and development came to a complete and irrevocable halt. What was the genesis of Crusader? Who were the players in the drama? Is there a viable option for the future of the field artillery? How was this decision arrived at? Did the process as it unfolded lead to a good decision?

## THE GENESIS OF CRUSADER

The role of artillery in army doctrine has undergone a rapid change to reflect 21<sup>st</sup> Century threats and strategic planning assumptions. While massing fires and supporting the maneuver forces remain constants in army planning, technology and innovative concepts of operation are continually opening new possibilities for the employment of long-range artillery fires.

More than any other event, the 1991 Gulf War demonstrated the need to modernize the cannon artillery assets. During Desert Storm, cannon artillery units were unable to support the campaign's fast-paced offensive operations. The M109 155mm self-propelled howitzer, first developed in the 1950s was unable to keep up with the army's armored elements and the howitzer's cumbersome firing operations were too slow to allow them to provide effective fire support for fast moving operations. On the other hand, the Multiple Launch Rocket System (MLRS) and the launcher's missile derivative the Army Tactical Missile System (ATACMS), acquitted themselves well and were particularly effective in attacking deep-targets such as Iraqi artillery, supply convoys, and command and control nodes.<sup>1</sup>

In 1993, an improved version of the M109 howitzer called the Paladin (M109A6) was introduced in army units. This upgraded M109 fielding was seen by many as an



FIGURE 1 PALADIN

interim solution for the cannon artillery problems that were highlighted during the Gulf War. The Paladin, has a maximum range of 30 kilometers, digitally receives computed firing data from a fire-direction center, automatically lays the tube for firing, and has a more powerful engine. The improved model, with its on-board location-navigation system, allows the Paladin to be dispersed to reduce artillery counterfire, while permitting the system to relocate rapidly after each firing to enhance survivability.<sup>2</sup>

Unfortunately, Paladin's ammunition handling operations remain labor intensive; its rate of fire slow due to manual ammunition loading, and breach swabbing requirements are outdated in this age of improved technology. Moreover, the vehicle's speed is limited by its chassis design, and its data handling and communications relay capabilities are not as good as those of the MLRS. Due to the configuration of its

chassis and turret, the M109 cannot be automated much further. On this basis, the army placed a high-priority on the development and procurement of Crusader, a technologically advanced, precision-fire howitzer system.

Originally, the Crusader was designed to be the world's first "automatic" field artillery system. Its firing operation would have been the first totally robotic system with



FIGURE 2 CRUSADER

no humans occupying the weapon compartment, capable of firing 10-12 rounds per minute at ranges in excess of 40 kilometers. When deployment of the new Excaliber artillery projectile began in 2005, the Crusader's firing range would have increased to over 50 kilometers. In essence, the

Crusader would have been also capable of a high rate of fire, which would have enabled a single Crusader to perform a time-on-target fire mission of 4-8 rounds, a task that now requires several guns to perform.<sup>3</sup>

### **VIABLE OPTION FOR THE FUTURE FIELD ARTILLERY?**

Of the current cannon systems, the Paladin and the German-made PzH 2000 are considered viable alternatives but neither would match the capabilities or requirements that Crusader would have brought to the battlefield. Future Combat System (FCS), the next generation cannon artillery may be the best alternative for the Crusader but limitations of FCS are the possibility of the in fielding until at least 2008 and the ongoing debate over the caliber of the main gun.

Looking at several sources, Crusader would have addressed several shortcomings of the Paladin. Crusader would have significantly improved firepower and mobility, enhanced survivability, and reduced manpower over Paladin. Many of the Crusader's improvements were synergistic and would have resulted in further battlefield advantage, such as smaller crews operating fully inside the vehicle, greater dash speeds, and special susceptibility reduction measures. Altogether, Crusader would have employed a collection of new technologies that were envisioned to greatly improve on the capabilities available with Paladin.

## Crusader Advantages Over Paladin

- Firepower
  - 2.5 times the surge fire rate, 3 times the sustain fire rate
  - 30-40% increase in range
- Mobility
  - 2.3 times greater power-to-weight ratio
  - -30% greater dash distance (90-second interval)
- Survivability
  - Entire crew protected under armor
  - Susceptibility reduction technologies
- Manpower
  - 30% reduction in crew (6 versus 9 for Paladin)
  - Automated loading/resupply<sup>4</sup>

While not totally comparable in all respects, the German PzH 2000 is the most capable foreign howitzer. The PzH 2000 is Germany's next generation 155mm self-propelled howitzer and began fielding in 1998. The PzH 2000 is an improvement over Paladin but it still would not have met all of the Crusader's requirements.

In addition to these differences, the PzH 2000's survivability and availability for firing missions would have been less than Crusader's. Without an automated resupply



FIGURE 3 PZH HOWTIZER

vehicle, the PzH 2000 crewmembers would have to leave the protection of their vehicle to physically carry the projectiles and powder charges between vehicles. This would have made them more vulnerable than Crusader crewmembers, which would have remained protected in their vehicles during resupply operations. The other major difference is the location of the crewmembers within the PzH 2000. The PzH 2000 is configured as a typical howitzer with the majority of the crew located in the weapons compartment. This typical cannon configuration would adversely affect their survivability. Conversely, the Crusader was designed to have separate crew and weapons compartments, which would have allowed additional armor to be placed around the crew compartment and provided them with better protection from hits in the weapon compartment.<sup>5</sup>

Description	Crusader	PzH 2000
Max rate of fire	10-12 per min (for 3-5 mins)	10 per min for 1 min 8 per min for 3 mins
Sustained rate of fire	3-6 per min	3 per min
Max range	40-50km	40km
Rearm time	less than 12 mins	less than 11 mins
Cross-country speed	39-48kph	45kph
Highway speed	67-78kph	61kph
Combat loaded	55tons	60tons
9-second survivable dash	750meters	750meters

FIGURE 4 CRUSADER-PZH HOWITZER COMPARISON

The army's planned Future Combat System (FCS) is envisioned to provide both direct and indirect fire support. In assessing the FCS as a replacement for the Crusader, the size of the gun at 105mm to provide both direct and indirect fires could



FIGURE 5 FCS PROTOTYPE

lead to a potential quandary. For the direct-fire mission, the 105mm cannon is fully capable. However, fire beyond 15 kilometers would require the use of rocket assisted projectiles (RAP). In the 1980s, the field artillery community came to the conclusion that 105mm cannons were too small to provide the level of fire support required in the future. There were several issues, which were brought to light:

- The 105mm projectile was assessed to be too small to carry enough submunitions to achieve required levels of lethality.
- The chamber was too small to allow sufficient propellant for long-range firing requirements.
- The diameter was too small to package the hardware required to control smart projectile's flight and still carry a highly lethal payload.<sup>6</sup>

As a result of these limitations, the 155mm projectile was deemed to be the smallest package that could be used effectively for future munitions development. As engineers examine the concept of using 105mm guns on the FCS for precision indirect fire support, some of the same issues may again come to light.

Streamlining this basic argument, Mr. John Pike, Director of GlobalSecurity.org, has expressed grave concerns about mounting a heavy gun on a light armored vehicle.

Mr. Pike has argued about the high risk of this proposal and he is unclear on how the Army plans to mount a 155mm gun, the size of Crusader and Paladin guns, on a 20-ton vehicle envisioned under the Army's FCS program. "Large-caliber, guns traditionally are mounted on heavy armored vehicles, so the vehicle's mass can absorb the recoil," he said.<sup>7</sup> He has also argued that the alternatives the Army is currently studying of smaller caliber weapons and smaller projectiles would adversely impact the future force. "Maybe if the indirect fire howitzer is firing fast enough, you could achieve greater lethality with a smaller bullet," Pike said, "But that would reverse the inexorable trend from the 20<sup>th</sup> century toward bigger bullets."<sup>8</sup> Mr. Pike believes that the dilemma and challenges facing the Army in the development of FCS could take nearly a decade to finish, thereby missing the Army's plan to begin deploying the initial features of the FCS in 2008. In concluding his argument, Mr. Pike expressed concern over the trade-off of the Crusader versus FCS by stating, "I think it's one of the highest risk projects the Army is currently embarked on and the highest risk project in the FCS system."<sup>9</sup>

Even more compelling than the risk associated with the FCS armament has been the risk associated with the force structure reductions that have already been implemented in preparation for the Crusader fielding in 2008 and the distinct possibility of not having a modern cannon weapon system to meet future needs of the Army.

Over the past several years, the Army has reduced the number of field artillery battalions by 35 percent, anticipating the capabilities Crusader would have brought to the battlefield.<sup>10</sup> The Army has also increased the area of operations for the division from 10,000 square kilometers to 24,000 square kilometers. Crusader would have significantly out-ranged Paladin, had a higher rate of fire and increased responsiveness to cover this increased operational challenge.<sup>11</sup> Many advocates believe this risk will remain until the next generation of howitzer is fielded.

In coming years, the Army could be faced with conflict situations ranging from counter-guerilla operations to intense conventional and/or weapons of mass destruction (WMD) warfare. Ethnic unrest may increase while conflicts over territories, resources and religious disputes could spillover and evolve into medium or even high-intensity warfare. This is particularly true in the Balkans and could also be the case in the Persian Gulf. Regional rogue states could threaten U.S. allies, coalition partners, or

even the U.S. homeland using a variety of means, including terrorism, WMD, and conventional warfare. Failed states, such as Pakistan and Indonesia, could destabilize their regions and create unforeseeable situations that threaten U.S. national interests. Finally, Russia or China could emerge as formidable strategic adversaries of the U.S. and directly challenge national interests on the Korean peninsula, in Southwest Asia, or Taiwan.<sup>12</sup> Regardless of which situation may arise, the U.S. must remain prepared to conduct combat operations in all types of terrain and climates and against hostile forces that could take advantage of U.S. vulnerabilities.

Several conclusions can be drawn about the future options for the field artillery. Neither Paladin nor PzH 2000 would have matched the capability of the Crusader system. FCS maybe able to match the Crusader capabilities but there are still unknown variables when studying the feasibility of the caliber of the weapon system to be mounted on this light armored vehicle. There are several hotspots throughout the globe that could cause the U.S. to enter into a conflict where Crusader's capabilities would have given the army a marked advantage. Couple these possible global and regional threats with risks the army has already taken and one could argue that there is valid need for continuing the Crusader program. Even with these basic conclusions, one point stands out, Crusader would have been a key component in the service's future because it would have given the army a decisive advantage in its ability to attain full-spectrum dominance across any battle contingency.

## **MAJOR PLAYERS**

The decision to cancel Crusader was controversial and followed by a period of heated debate. As such, the leaders involved in the Crusader decision-making process came to the forefront in both the defense debates as well as on the congressional floor. These leaders came from diverse backgrounds and varied greatly

in experience but all were passionate about their beliefs on the cancellation debate. The major players represented the senior leaders from the Secretary of Defense, Secretary of the Army and subordinate commands, Congress and Senate.



FIGURE 6 MAJOR PLAYERS

#### OFFICE OF THE SECRETARY OF DEFENSE

The Honorable Donald Rumsfeld heads the Department of Defense. He first entered elected office in 1962 as a member of the House of Representatives from Illinois. He was re-elected three times and finally resigned in 1969 during his fourth term to serve in the Nixon Administration as the Assistant and Counselor to the President. In 1973, he left the White House to serve as U.S. Ambassador to the North Atlantic Treaty Organization (NATO) in Brussels, Belgium. In 1974, he was recalled to Washington D.C., to serve in the Ford Administration as the Chief of Staff of the White House and later as the 13<sup>th</sup> U.S. Secretary of Defense, the youngest in the country's history. After the Ford administration, he served in various Chief Executive Officer, President and Chairman positions with private corporations. Upon the election of George W. Bush, he was again called to service and assumed his current position as the 21<sup>st</sup> Secretary of Defense in January 2000. He is the first person to hold the prestigious position as the Secretary of Defense twice.<sup>13</sup>

Secretary Rumsfeld's primary deputy is Paul Wolfowitz who was named as the 28<sup>th</sup> deputy on March 2, 2001. Secretary Wolfowitz brings with him to this position a wealth of knowledge of the interworkings of the Pentagon since this is his third tour of duty within the building. From 1989 to 1993, Dr. Wolfowitz served as Under Secretary of Defense for Policy in charge of the 700-person defense policy team that was responsible to Secretary of Defense Dick Cheney for matters concerning strategy, plans, and policy. During this period Secretary Wolfowitz and his staff were responsible for reshaping of strategy and force posture at the end of the Cold War. From 1977 to 1980, he served as the Deputy Assistant of Defense for Regional Programs, where he helped create the force that later became the United States Central Command and initiated the Maritime Pre-positioning Ships, the backbone of the initial U.S. deployment twelve years later in Operation Desert Storm. Finally from 1973 to 1977, he served in the Arms Control and Disarmament Agency, working on strategic Arms Limitation Talks and a number of nuclear nonproliferation issues.<sup>14</sup>

#### OFFICE OF THE SECRETARY OF THE ARMY

Thomas E. White became the 18<sup>th</sup> Secretary of the Army (SecArmy) on May 31, 2001. Secretary White began his public service career as an Army Officer. After graduating from the United States Military Academy at West Point, he was commissioned in the Army in 1967, rising to the rank of Brigadier General in 1990. His distinguished career included two tours in Vietnam and service as Commander, 1<sup>st</sup> Squadron, 11<sup>th</sup> Armored Cavalry Regiment; Commander, 11<sup>th</sup> Armored Cavalry Regiment, V Corps; and Executive Assistant to the Chairman, Joint Chiefs of Staff.<sup>15</sup>

General Eric K. Shinseki assumed duties as the 34<sup>th</sup> Chief of Staff, United States Army (CSA), on 22 June 1999. General Shinseki graduated from the United States Military Academy at West Point in 1965. Since his commissioning in the Armor, he has served in a variety of command and staff assignments, to include two tours in Vietnam. He served in Germany as the Commander, 3d Squadron, 7<sup>th</sup> Cavalry; Commander, 2d Brigade, 3<sup>rd</sup> Infantry Division; Assistant Division Commander for Maneuver, 3<sup>rd</sup> Infantry Division. He later commanded the 1<sup>st</sup> Cavalry Division at Fort Hood; served as the Deputy of Chief of Staff for Operations and Plans on the Army Staff and commanded

the United States Army Europe. Prior to assuming his current position as the Chief of Staff, General Shinseki served as the 28<sup>th</sup> Vice Chief of Staff.<sup>16</sup>

#### CONGRESS AND SENATE

Senator James M. Inhofe was first elected to serve for Oklahoma in the United States Senate in 1994. He serves as a member of the Armed Services Committee with responsibilities on the Subcommittee for Readiness & Management Support and as the Ranking Member on the Strategic Forces and Airland Subcommittee.<sup>17</sup>

Congressman J.C. Watts, Jr. from Oklahoma was first elected to represent the fourth district of Oklahoma in the House of Representatives in November 1994. Upon entering the House of Representatives, fellow congressman quickly recognized the leadership qualities of Congressman Watts and elected him to serve as the chairman of the House Republican Committee, the fourth-highest position in the House. J.C. Watts has a solid reputation in Oklahoma and throughout the nation as a perceptive and passionate spokesman for improving and redeveloping communities, fiscal discipline, strengthening education, restoring values and bolstering our national defense.

Congressman Watts serves on the Armed Services Committee and is a member of the Military Readiness Subcommittee and the Procurement Subcommittee.<sup>18</sup>

Senator Carl Levin was elected to represent the state of Michigan in 1984. Senator Levin is currently the chairman of the Senate Armed Services Committee, where he has earned a reputation as a strong supporter of the national defense and in the prudent use of defense resources. He was an early and consistent advocate of efforts to prepare the American military to combat terrorism and other emerging threats of the post-Cold War world.<sup>19</sup>

Senator Mark Dayton is first-term Democrat from Minnesota. Elected in November 2000, he sits on several prominent committees to include the Armed Services, Government Affairs, and Rules and Administration.<sup>20</sup>

## **OPPOSING VIEWS**

The debate on the cancellation on a major piece of equipment was the first test of the new administration. As such, the opposing views were brought to the public forum in a heated debate that often bordered on insubordination and disrespect.

The key issues associated with why the administration was against the continuation of fielding the Crusader centered around two things: first, statements made by the current administration about the future capabilities of the services'; and second, the administration's belief that finite resources would drive their concern about not wasting money on unneeded or unwanted programs.

In statements made while on the campaign trail, then-Governor George W. Bush laid down the gauntlet for future policy by stating; "I expect the military's priorities to match our strategic vision, not the particular visions of the services, but a joint vision for change. I will direct the Secretary of Defense to allocate these funds to new programs that do so. I intend to force new thinking and hard choices."<sup>21</sup>

The statement was not made in the context of the Crusader decision; it was made to warn the American people that they could be witnessing a revolution in the technology of war, that power is increasingly defined not by size, but by mobility and swiftness. He later stated that if he were elected he would initiate a comprehensive review of the military, the state of its strategy, the priorities of procurement. He also discussed the possibility of skipping a generation of technologies. "In the future," he said, "we may not have months to transport massive divisions to waiting bases or to build new infrastructure on site. Our forces in the next century must be agile, lethal, readily deployable, and require a minimum of logistical support. We must be able to project power over long distances in days or weeks rather than months. Our military must be able to identify targets by a variety of means from maritime patrol to a satellite, and then be able to destroy those targets almost instantly with an array of weapons. On land, our heavy forces must be lighter, our light forces must be more lethal, all must be easier to deploy, and these forces must be organized in smaller, more agile formations."<sup>22</sup>

From these statements the initial charter was derived and issued to senior leaders. George W. Bush thus began to establish the framework for cancellation and transformational decisions for the future.

Subsequent to these statements and after George W. Bush's election, Secretary of Defense Rumsfeld and his elite team began to transform this guidance and into finite actions. Crusader quickly became a target program because Secretary Rumsfeld saw it as "not truly transformational"; it lacked both precision capability and did not fall into the need category when working with a finite set of budgeting resources.

According to statements made by Secretary Rumsfeld, "The Crusader, may achieve a higher rate of fire and better maneuverability than the M109 Paladin self-propelled howitzer it is envisioned to replace, but it lacks the transformational element of precision fire. Precision was not part of the picture when Crusader was designed."<sup>23</sup> The Secretary of Defense further held the view that operations associated with Enduring Freedom in Afghanistan have garnered valuable lessons in this area. According to Mr. Rumsfeld, "In Afghanistan, it was found that precision matters, and it matters a lot, besides achieving accuracy the use of precision munitions reduced the incidence of military friendly fires and civilian casualties. About 65 percent of U.S. munitions used in Afghanistan were precision-guided."<sup>24</sup> Secretary Rumsfeld's key assistant, Deputy of Defense Secretary Paul Wolfowitz also alluded to this issue when he told a congressional hearing a similar storyline. Secretary Wolfowitz told the hearing that future beneficiaries of program cancellation decisions would be "systems and technologies that provide greater precision, more rapid deployability and the ability to integrate fires." He stated, "the war in Afghanistan had demonstrated the importance of precision munitions."<sup>25</sup>

The final argument made by the administration for canceling the Crusader program centers around finite resources. During the debate, Mr. Rumsfeld continually addressed the decision by stating, "Resources are always finite. Tough choices have to be made. Such choices are generally not made between good and bad or needed and not needed, or even between what's wanted and not wanted. Tough choices are made at the margin, often between programs that are both desirable and wanted. But nonetheless, choices have to be made, and the American people know that. They

make choices every day. It isn't whether something's good or nice or wanted; it's a question of what choice is best when resources are finite.<sup>26</sup>

Thus, the President and the current administration made the decision to cancel Crusader based on the pillars of transforming the military infrastructure, the Crusader's lack of precision munitions capability, and finally the need to cancel programs because of finite resources.

Conversely, the Army leadership, retired community, and senior members of both the House of representatives and Senate were all adamant in their argument to save Crusader. Their basic premise was that there is still a viable need for a heavy cannon system and the technological advances Crusader brings to the fight justify the acquisition of the program.

Secretary of the Army Thomas H. White and Chief of Staff of the Army Eric K. Shinseki and two prominent retired General Officers were the most vocal supporters for Crusader. As the CSA laid out his argument, he discussed the synchronization of the army transformation to allow the service to execute a doctrine for full spectrum dominance in the 21<sup>st</sup> century. He also outlined shortfalls; one in particular was the operational shortfall of organic, indirect fires. He argued that a ground commander must be able to employ indirect fires in order to suppress the enemy forces, destroy enemy capabilities and protect friendly forces. He also favored a robust cannon force because of the uncertainty and risk involved in every operation. In testimony before the Senate Armed Services committee, he said, "commanders need the responsive capability to rapidly and effectively generate "walls of steel: to deny the enemy any opportunities by protecting the exposed flanks of our forces, a mission which will become even more important in the future, non-linear battlefield where enemy formations will be more widely dispersed."<sup>27</sup>

Both the CSA and Secretary of the Army have continually lobbied for the army's need for organic fires requires responsive, immediate, twenty-four-hours-a-day, seven-days-a-week, accurate support in all weather and terrain, capable of re-engaging fleeting targets, and sustainable for as long as they are required. The CSA stated in the senate hearing, "These indirect fire capabilities are what we must provide to our Soldiers as they fight to win the close battle."<sup>28</sup> He went on to say, "Secretary White and

I have testified consistently about the need to fill these requirements. That requirement remains valid today, and we intend to fill it. My testimony on that requirement has in the past, and is today, based solely on my best, professional military judgment. We have also testified in the past that the redesigned Crusader artillery system best satisfied that requirement in the mid-term.”<sup>29</sup>

The retired community also weighed into the debate to back the army’s stance for the valid requirement to field Crusader. Both GEN (Ret) Gordon Sullivan and GEN (Ret) Barry McCaffrey threw their support to the Secretary of the Army and CSA. General Gordon Sullivan wrote a very strong article saying that Crusader is the most technologically advanced ground combat system ever developed. He wrote, “The Crusader was designed from the ground up to fight in the digital-network-centered battlefield, to exploit information domination. Its advanced robotic operations and automated ammunition-handling systems allow the crew, enclosed in a protected cockpit, to exploit information instead of straining muscles. The advanced composite hull, liquid-cooled gun and mobility of the system elevate the effectiveness of our forces by 50 percent, with a corresponding reduction in resources. Crusader covers an area 77 percent greater than current systems and has a 3.1 advantage in rate of fire.”<sup>30</sup>

General McCaffrey echoed these sentiments by stating, “Crusader is the first artillery system in the world with the mobility to keep up with the Abrams tank moving at nearly 50 kph across rough terrain in the dark. Congress should exercise its right to field and equip the Army with this vital Crusader weapon system.”<sup>31</sup>

The leading proponents from Congress argued that Crusader is the best system for the war fighters. Senator James M. Inhofe, R-Oklahoma, insisted that both Army civilian and military leaders had testified repeatedly that the war fighters needed the Crusader system. In an article written for the Crusader he stated, “Our men and women of the military expect and deserve the best weapon systems available. PowerPoint slides and good ideas look and sound great and are lightweight, but they are going to win wars.”<sup>32</sup> He also argued that, “our existing, aging artillery system is already being outgunned in terms of rapid fire and range by more advanced systems in other countries. We cannot allow our future troops to go into battle without the very best equipment, and crusader will be the best.”<sup>33</sup>

Senator Inhofe also argued that the President included Crusader in his budget request for the fiscal year. He stated, "The Army made force-structure and funding sacrifices to keep it fully funded. The Army clearly wants Crusader and has testified it needs the system to be part of its transformation. Arguments that experience in Afghanistan caused the Department of Defense to re-examine priorities are clearly refuted by testimony by the vice chief of staff when talking about Operation Anaconda. Without proper analysis, Congress cannot be assured that what the department proposes, represents the best alternative for national defense."<sup>34</sup>

Senator Mark Dayton, D-Minnesota concurred with the assessment made by Senator Inhofe. He stated, "The President submitted a budget proposal to Congress on February 4, 2002, calling for \$475.6 million to continue development of the Crusader. No cutbacks were proposed. There was no reservation about the program expressed. The Crusader is on time. It's on budget. It's on specification. And in the simulated tests so far, it's been right on target."<sup>35</sup> He later stated, "I myself have asked a number of military leaders who have come to my office, incoming and outgoing Commanders in Chief, the Chief of Staff for Europe, and I was at the national training center in California last year and asked several tank commanders themselves what they thought of the Crusader. They were unanimously in support of it."<sup>36</sup> He stated that General Keene told the Senate Armed Services Airland Subcommittee, "Ground forces attacking in Afghanistan could have used a Crusader to pound al Qaeda holdouts in the mountains of Gardez. Unlike some air delivered munitions, poor weather wouldn't have stopped the Crusader's precision fire."<sup>37</sup>

Congressman J.C. Watts, Jr. from Oklahoma, also a strong supporter of keeping Crusader, based his belief that the system would have better protected our ground forces. He states, "Crusader is required for protecting ground forces. It is also required to modernize a previous generation of now-outdated armament. Congress authorizes, appropriates, and legislates. Regardless of the latest fad within DoD, Congress will work its will and address these needs."<sup>38</sup>

Without a doubt the opposing views were diverse. Each proponent, whether it was for or against was adamant in their views. The insights derived from the opposing views were two-fold. The administration has set the tone for future decisions by

implying it will re-look programs to ensure they meet the “transformation gate” and are not resource burdens. Conversely, the senior leadership of the Army and Congress, through the entire debate and to the very end, remained focused on the need of the Crusader system for the Objective Force. In the end, the Secretary of Defense prevailed and Crusader, a program that once seemed so promising and so close to fruition was, with a stroke of the pen sent into oblivion. The debate on cancellation of programs and systems will continue to be at the forefront of politics inside “the Beltway.”

## **THE DECISION-MAKING PROCESS**

The real controversy surrounding the cancellation of the program does not revolve around the open and public debate. In fact, Secretary of Defense Rumsfeld has publicly stated on several occasions that debate is healthy. He said, “Where differences of opinion exists, it is not only healthy, it is essential that it be aired. That will not undermine the civilian control of our armed forces that are so fundamental to our system of government.”<sup>39</sup>

Rather, the controversy that was played out in the Department of Defense, Congress, private sector and the press was based on how the decision was made and the in fighting and bickering which occurred once it became obvious that the cancellation decision was forthcoming.

The decision-making process originated with the submission of the Department of Defense fiscal year 2003 budget to the Congress on 4 February 2002. The proposed budget included \$475 million in continued research and development funding for the Crusader program. Key testimony on this critical program was then given to both houses on Congress. The CSA specifically spoke on the importance of Crusader in the future strategic plans of the Army. On 28 February 2002, General Shinseki testified before Congress that, “Crusader’s agility to keep up with our ground maneuver forces, its longer range, its high rate of fire, its precision, and the addition of Excalibur would bring the potential of a precision weapon with a platform and the munitions being brought together and would be a significant increase to the potential shortage of fires that we have today.” And he continued by stating, “Excalibur itself would not resolve the problem, and Crusader is very much a part of our requirement.” The bottom line

quoting General Shinseki's testimony to the committee on 7 March 2002, "is we need it."<sup>40</sup>

Shortly after this relevant testimony, changes began to occur. Reports surfaced that OSD would review the Crusader and other weapon systems during the program review process leading up to the FY2004 budget and that a decision on the program would be made around 1 September 2002.

However, for reasons unexplained the decision-making process was quickly amended. On 2 May 2002, Secretary Rumsfeld told the press that Deputy Secretary Wolfowitz and Undersecretary E.C. "Pete" Aldridge had advised the Secretary of the Army that they wanted a written study within 30 days outlining specific alternatives if Crusader was cancelled. Secretary Rumsfeld went on to say that is was his impression that when the study came back, a final decision would be made. In other words, there would be no final decision until the 30-day study was completed sometime on 2 June 2002. Also on 2 May 2002, Undersecretary Aldridge told the press that OSD will brief the deputy secretary in 30 days, and then the decision will be made. According to the Undersecretary, "We're allowing the Army to give us an objective view on the issue so we have a basis for an analytical judgment based on rational and objective criteria."<sup>41</sup>

Finally, less than a week later came yet another change. On 8 May 2002, before the 30-day study was completed, Secretary Rumsfeld announced that "After a good deal of consideration I have decided to cancel the Crusader program...after months of reviews, wide-ranging discussion, and in-depth analysis, a review not just of the Crusader program, but of future capabilities, of the strategy to guide us, and of the framework for assessing and balancing risks. The senior leaders of this department, military and civilian, service chiefs, service secretaries and I spent countless hours – I have not bothered to add them up, but it was day after day after day, several hours a day – discussing strategies, capabilities, threats and risks."<sup>42</sup>

Therein lies the crux of the issue. DoD laid out a series of gates that the army would be required to meet and before the army leadership had the ability to argue its case, the Secretary of Defense made a unilateral decision to kill the program. This shortened timeline and decision-making process brought out a rash of critics from both

Congress and army leadership and worsened the already growing division between the DoD and army leadership.

Lawmakers bitterly argued that Secretary Rumsfeld's failure to consult with them over the Crusader announcement smacked of what they regard as the defense secretary's high-handed, arrogant manner that has rankled them in past debates. The Oklahoma delegation, where the Crusader would be built and tested, quickly became the most vocal. After hearing of the decision, Representative J.C. Watts Jr. lobbied his colleagues through personal phone calls and "Dear Colleague" letters, and requested internal administration documents to examine the decision. Representative Watts also publicly criticized the administration for not informing Congress of its plans and for the amount of time it took to make the decision.

Senator James Inhofe, R-Okla., expounded on Rep. Watts' basic argument by sharply questioning Rumsfeld about how the decision was made. Senator Inhofe told a congressional hearing that he called personally several senior uniformed military personnel, including the Chairman of the Joint Chiefs of Staff and the Army Chief of Staff and none had been consulted about canceling the Crusader program. Senator Inhofe summed up his frustration by observing, "No one was aware of the decision that was to be made."<sup>43</sup>

Senator Daniel Akaka, D-HI, was also disturbed about the handling of the cancellation. During a Senate hearing on the subject, he made the following statement for the record. "I want to join others in telling you (Secretary Rumsfeld) that I am disturbed and concerned about the way the Department of Defense has handled the Crusader program in the past few weeks. In most situations, I consider the Secretary of Defense to be the expert, expert on the needs of the men and women serving in the armed forces. I rely on his advice and direction for what the department needs to execute its mission or preserving our national security. A lot of my trust in his expertise and advice of his staff is based on my belief that he relies upon those in the department, both uniform and civilian, to determine what is best for the DoD. I am having a very difficult time with this issue, because it seems apparent to me that the Army is not being heard on this issue."<sup>44</sup>

Senator Carl Levin, R-Michigan, was even harsher in his criticism on how the decision was made. Senator Levin quoted the findings of an Army's Inspector General Report, "The evidence established that the Vice Chief of Staff of the Army, received a document from a defense contractor source on 30 April 2002 which addressed the termination of the Crusader program. Prior to receiving this document, the Army was unaware of any proposed change to the Crusader program. That is highly disturbing finding of the Inspector General."<sup>45</sup>

Lawmakers say one of the roughest spots in their nagging perception that Secretary Rumsfeld has failed to show them the kind of respect they feel is their due. John P. Murtha, D-Pennsylvania, the ranking democrat on the Appropriations subcommittee that controls defense spending, said he is accustomed to being called "well in advance" on proposals and plans inside the Pentagon. Murtha complained that Deputy Secretary Wolfowitz called him the same day as Secretary Rumsfeld's announcement on Crusader. "There were lots of things we didn't know," he said.<sup>46</sup>

To counter the outbreak of harsh criticism, the administration lead by Secretary Rumsfeld came forward and appeared at several Congressional hearings in an attempt to persuade the dissenting view that the decision had been made properly and with a good deal of analytic thought had gone into the decision. However, many senators were not sympathetic to the administration's handling of the decision process and pressed him for an explanation into why DoD made the decision without consulting with the military leadership. Secretary Rumsfeld came across as very unapologetic when asked about whom was consulted among the army leadership. He stated to the Senate Hearing, "The technical question of did someone consult before the final decision was made it seems to me is an awkward one, because what took place was that I was out of town, and the deputy was chairing a series of meetings. I was in Afghanistan and the neighboring countries and I came back and it ended up, before I ever spoke to the president, it was in the press. It had leaked to the contractors. The contractors had called the Congress. The old Iron Triangle worked in real time, just magic. And as Senator Bunning said, there's no question but that it ends up being untidy."<sup>47</sup>

Therein lies the second major issue with the decision and how it was handled. The DoD leadership made the decision and directed the cancellation. As soon as the

army leadership received the directive, a leak occurred where pertinent information was provided to outside agencies.

In fact, The Washington Post reported that a leak from the Pentagon detailing the decision to cancel the Crusader was passed to United Defense Industries, the company developing the weapon, and then to retired General J. Binford Peay III, a member of the company board. General Peay quickly sent a fax outlining the decision to the office of General John M. Keane, the Army Vice Chief of Staff, on the morning of April 30 2002, more than seven hours before Deputy Defense Secretary Wolfowitz told Army Secretary White about it. In the fax, General Peay warned General Keane of the seriousness of the move to cancel the artillery system. The Washington Post subsequently obtained a copy of the fax from the Pentagon under the Freedom of Information Act.

Without a doubt, these leaks caused another major rift between DoD and Army leadership and brought into question the loyalty and trust in the superior/subordinate relationship. This was compounded when Secretary White delivered a paper of “talking points” to Capital Hill detailing reasons the Crusader program should be kept alive. The talking points were delivered within hours of a meeting in which Deputy Secretary Wolfowitz told Secretary White he had 30 days to come up with a plan to cancel the Crusader and put the money saved into advanced technology programs. Army officials said the timing was just a coincidence and insisted the Army’s Office of Legislative Affairs was simply responding to requests for information from Congress.<sup>48</sup> When Secretary White was questioned as to whether he had subordinates create or circulate the document among Congress, he said, “Absolutely not.” He went on to say, “he found the language of the document offensive in general and offensive to the Army specifically.”<sup>49</sup>

Secretary Rumsfeld was very upset with the entire process. In a press conference held shortly after the release of the “talking points”, Secretary Rumsfeld without mentioning names said he was looking into reports that Army officials had gone behind his back to Congress in hopes of building political pressure to rescue the program. He was quoted as saying, “I have minimum high regard for that kind of behavior.”<sup>50</sup> Secretary Rumsfeld further argued that he expects army leaders to fall in line once decisions are made. He went on to say, “ought a president and a secretary of

defense and a deputy secretary of defense be able to expect that the leadership will in fact be supportive once a decision is made? Of course.”<sup>51</sup> Undersecretary Aldridge supported Secretary Rumsfeld in this argument by stating, “to be on the Hill lobbying for a different approach I think is probably not appropriate. Let the secretary make up his mind as to what are the priorities for this department.”<sup>52</sup>

## **CONCLUSION**

The widening gap over the Army’s Crusader program within the Department of Defense exposes what might prove to be a long and protracted battle within “the Beltway”. Although powerful congressional representatives may have grumbled over the way the decision was made; it does not seem to have hurt the Department of Defense in the end. Last year’s defense budget was increased by 50 billion dollars, even in the aftermath of the cancellation decision, and there does not appear to have been any effort on the part of Congress to make Secretary Rumsfeld pay for his decision to cancel Crusader. In fact, to an outsider, it appears that the wake of discontent has disappeared and aside from a few bruised feelings in the Army, the ship of state has sailed on smoothly.

Post 9-11 finds the Army at a crossroad of changing and new times. The old ways of doing business no longer applies. Things are moving quickly and transformation is occurring not only in the way we expect to fight but also in how we are doing business in DoD. The lesson from the Crusader cancellation debacle is that the Army needs to revisit its justification for the entire family of “new programs” and seriously question the utility of future FCS. Those programs at risk may need to be re-validated lest the shifting sands of the new geo-strategic era bring them down as they did Crusader.

In retrospect, regardless of how clumsily the decision was made, Secretary Rumsfeld was completely within his authority to deviate from the systems his subordinates were using to arrive at decisions and to do so at the slightest whim. It was for Congress to discipline him and the Bush administration, should it have appeared to them that Secretary Rumsfeld was wrong in his decision. That Congress chose to

abide by the decision removes from the overall debate any criticism on how the decision was arrived at.

It will be interesting to observe the DoD decision-making process in the coming months and years to see if these process continues on its present course or a more congenial tone will emerge on the Hill and within the DoD infrastructure.

Word Count = 7,778



## ENDNOTES

<sup>1</sup> Andrew Leyden, "Gulf War Debriefing Book, An After Action Report", available from <http://www.leyden.com/gulfwar/>; Internet; accessed on 15 September 2002.

<sup>2</sup> United States Army Weapon System Book, 2002, 238-239.

<sup>3</sup> Jacquelyn K. Davis and David R. Tanks, "Crusader, Dinosaur or Catalyst for Revolutionary Change," The Institute of Foreign Policy Analysis, April 2001, 5-6

<sup>4</sup> General Accounting Office, Report to the Secretary of Defense, Army Armored Systems: Meeting Crusader Requirements will be a technical Challenge (Washington, D.C.: U.S. General Accounting Office, June 1997), 11.

<sup>5</sup> Ibid.

<sup>6</sup> Nick Jonson, "Developing a Crusader replacement poses high risks," Aerospace Daily, August 13, 2002, available from <http://www.globalsecurity.org/org/news/2002/020813-fcs.htm>; Internet; accessed on 15 January 2003.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Dave Eberhart, "Army Still Needs the Crusader", NewsMax.com, May 10 2002, available from <http://www.newsmax.com/archives/articles/2002/5/9/210450>; Internet; accessed on 15 January 2003.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Davis and Tanks, pp. 7-8.

<sup>13</sup> Biography on Donald H. Rumsfeld. Defense Link, available from [http://defenselink.mil/bios/secdef\\_bio.html](http://defenselink.mil/bios/secdef_bio.html); Internet; accessed on 15 September 2002.

<sup>14</sup> Biography on Paul Wolfowitz. Defense Link, available from [http://defenselink.mil/bios/depsecdef\\_bio.html](http://defenselink.mil/bios/depsecdef_bio.html); Internet; accessed on 15 September 2002.

<sup>15</sup> Official biography for Secretary of the Army Thomas E. White, available from <http://www.army.mil/leaders/secarmy/bio.html>, Internet; accessed on 15 September 2002

<sup>16</sup> Official biography for Chief of Staff of the Army Eric K. Shinseki, available from <http://www.army.mil/leaders/csa/bio.html>; Internet; accessed on 15 September 2002

<sup>17</sup> Biography on Senator James M. Inhofe of Oklahoma, available from <http://inhofe.senate.gov/inhofebio.htm>; Internet; accessed 15 September 2002.

<sup>18</sup> Biography on Congressman J.C. Watts, Jr. of Oklahoma, available from <http://watts.houseofrepresentatives.gov/wattsbio.htm> Internet; accessed 15 September 2002.

<sup>19</sup> Biography on Senator Carl Levin of Michigan, available from <http://levin.senate.gov/levinbio.htm> Internet; accessed 15 September 2002.

<sup>20</sup> Biography on Senator Mark Dayton of Minnesota, available from <http://dayton.senate.gov/daytonbio.htm>; Internet; accessed 15 September 2002.

<sup>21</sup> President Bush Speech, given at the Citadel in Sept 1999, available from <http://www.whitehouse.gov/response/index.htm>; Internet; accessed 16 September 2002.

<sup>22</sup> Ibid.

<sup>23</sup> Gerry J. Gilmore, "Crusader Not "Truly Transformational," Rumsfeld Says, Defense Link, available from <http://www.dod.mil/news/May2002.html>; Internet; accessed on 19 September 2002.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> "Rumsfeld Defends Termination of Crusader Artillery System", U.S. Department of State: International Information Programs, 19 May 2002, available from <http://usinfo.state.gov/regional/nea/sasia/afghan.htm> Internet; accessed on 19 September 2002.

<sup>27</sup> Statement by GEN Eric K. Shinseki, Chief of Staff, U.S. Army before the Committee on Armed Services, U.S. Senate on the Crusader Self-Propelled Howitzer Program, May 16, 2002, available from <http://www.army.mil/leaders/csa/testimony.htm> Internet; accessed on 18 September 2002.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Testimony by Secretary of Defense Donald H. Rumsfeld on Crusader Artillery System, May 16, 2002, available from <http://www.defenselink/speeches/2002-secdef2.html>; Internet; accessed on September 12, 2002.

<sup>31</sup> Barry McCaffrey, "Bring back the Crusader system", NucNews, 31 May 2002, available from <http://prop1.org/nucnews/2002nn/0205nn/0205.htm> Internet; accessed on 5 November 2002.

<sup>32</sup> James M. Inhofe, "Crusader is vital weapon", USA Today, May 15, 2002, available from <http://www.usatoday.com/news/comment.htm>; Internet; accessed 5 November 2002.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

<sup>35</sup> Floor Statement of Senator Mark Dayton, On the Crusader Program, June 19, 2002; available from <http://dayton.senate.gov/floor/fs01017.html>; Internet; accessed 15 Oct 2002.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> George Edmonson, "Pentagon to Kill Controversial Artillery Program", Cox Newspaper, May 9, 2002, available from <http://www.coxnews.com/washingtonbureau/staff/edmonson.htm>; Internet; accessed on 7 November, 2002.

<sup>39</sup> Rumsfeld Testimony.

<sup>40</sup> Ibid.

<sup>41</sup> Testimony by Undersecretary of Defense Aldridge on Crusader Artillery System, May 16, 2002, available from <http://www.defenselink/speeches/2002-secdef2.html>; Internet; accessed on September 12, 2002

<sup>42</sup> Ibid.

<sup>43</sup> George Cahlink, "Rumsfeld defends decision to dump Crusader weapon", Government Executive Magazine, May 16, 2002, available from <http://207.27.3.29/dailyfed/0502/051602g1.htm>; Internet; accessed 5 November 2002.

<sup>44</sup> Rumsfeld Testimony.

<sup>45</sup> Ibid.

<sup>46</sup> Jill Barshay, "After handling Crusader decision, Rumsfeld must handle fallout," CQ Weekly, 11 May 2002, volume 60, issue 19, p1204.

<sup>47</sup> Rumsfeld Testimony.

<sup>48</sup> "Rumsfeld dumps Crusader, defends decision", Inside Politics, 9 May 2002, available from <http://www.cnn.com/2002/allpolitics/05/08/rumsfeld.crusader>; Internet; accessed on 21 November 2002.

<sup>49</sup> Joe Burbas, "Crusader howitzer gets the axe", Army Link News, May 8, 2002, available from <http://www.dtic.mil/armylink/news/may2002/a20020508crusader.html>; Internet; accessed on 21 November 2002.

<sup>50</sup> "Flap over shelling artillery system", CBSNEWS.com, May 2002, available from <http://www.cbsnews.com/stories/2002/05/02/national/main507891.shtml>; Internet; accessed on 20 November 2002.

<sup>51</sup> Ibid.

<sup>52</sup> "Rummy Rumbles with Army Brass", CBSNEWS.com, 3 May 2002, available from <http://www.cbsnews.com/stories/2002/05/07/national/news508198.shtml>; Internet; accessed on 20 November 2002.



## BIBLIOGRAPHY

- Barnett, Donald L., MAJ, "Crusader target weight: 38 to 42 tons." Field Artillery, March-April 2000, 34-36.
- Barshay, Jill. "After handling Crusader decision, Rumsfeld must handle fallout," CQ Weekly, 11 May 2002, volume 60, issue 19, 1204.
- Biography on Congressman J.C. Watts, Jr. of Oklahoma. Available from <<http://watts.houseofrepresentatives.gov/wattsbio.htm>>. Internet. Accessed 15 September 2002.
- Biography on Donald H. Rumsfeld. Defense Link. Available from <[http://defenselink.mil/bios/secdef\\_bio.html](http://defenselink.mil/bios/secdef_bio.html)>. Internet. Accessed on 15 September 2002.
- Biography on Paul Wolfowitz. Defense Link. Available from <[http://defenselink.mil/bios/depsecdef\\_bio.html](http://defenselink.mil/bios/depsecdef_bio.html)>. Internet. Accessed on 15 September 2002.
- Biography on Senator Carl Levin of Michigan. Available from <<http://levin.senate.gov/levinbio.htm>>. Internet. Accessed 15 September 2002.
- Biography on Senator James M. Inhofe of Oklahoma. Available from <<http://inhofe.senate.gov/inhofebio.htm>>. Internet. Accessed 15 September 2002.
- Biography on Senator Mark Dayton of Minnesota. Available from <<http://dayton.senate.gov/daytonbio.htm>>. Internet. Accessed 15 September 2002.
- Burbas, Joe. "Crusader howitzer gets the axe", Army Link News, May 8, 2002. Available from <<http://www.dtic.mil/armylink/news/may2002/a20020508crusader.html>>. Internet. Accessed on 21 November 2002.
- Cahlink, George. "Rumsfeld defends decision to dump Crusader weapon, Government Executive Magazine, May 16, 2002. Available from <<http://207.27.3.29/dailyfed/0502/051602g1.htm>>. Internet. Accessed 5 November 2002.
- Crawley, Vince. "Crusader may not be Rumsfeld only target." Air Force Times, volume 62, number 45, June 3, 2002, 28.
- "Crusader", Director, Operational Test & Evaluation FY99 Annual Report. Available from <<http://www.globalsecurity.org/military/library/budget/fy1999/dote/army/99crusader>>. Internet. Accessed on 15 September 2002.
- Davis, Jacquelyn and David R. Tanks, "Crusader, Dinosaur or Catalyst for Revolutionary Change," The Institute of Foreign Policy Analysis, April 2001.

- Eberhart, Dave. "Army Still Needs the Crusader", NewsMax.com, May 10 2002. Available from <<http://www.newsmax.com/archives/articles/2002/5/9/210450>>. Internet. Accessed on 15 January 2003.
- Edmonson, George. "Pentagon to Kill Controversial Artillery Program", Cox Newspaper, May 9, 2002. Available from <<http://www.coxnews.com/washingtonbureau/staff/edmonson.htm>>. Internet. Accessed on 7 November, 2002.
- Emerson, Charles J., Jr. "Crusader: Hammer for today, forge for the future." Field Artillery, March-April 2002, 42-45.
- "Flap over shelling artillery system", CBSNEWS.com, May 2002. Available from <<http://www.cbsnews.com/stories/2002/05/02/national/main507891.shtml>>. Internet. Accessed on 20 November 2002.
- Floor Statement of Senator Mark Dayton, On the Crusader Program, June 19, 2002. Available from <<http://dayton.senate.gov/floor/fs01017.html>>. Internet. Accessed 15 Oct 2002.
- Fowles, David C., "Potential into power: the King of Battle's transformation into the 21st century". U.S. Army Command and General Staff College, School of Advanced Military Studies. Fort Leavenworth, KS, 1995.
- Gilmore, Gerry J. "Crusader Not "Truly Transformational," Rumsfeld Says, Defense Link. Available from <<http://www.dod.mil/news/May2002.html>>. Internet. Accessed on 19 September 2002.
- Gourley, Scott R. "Crusader: Material archetype for Army Transformation." Army, volume 51, number 6, June 2001, 53-55.
- Harrison, Frank E., The Managerial Decision-Making Process. 2d edition. Houghton Mifflin Company, Boston, MA. 1981.
- Hickson, David J.; Butler; Richard J.; Cray, David; Mallory, Geoffrey R.; Wilson, Davis C., Top Decisions: Strategic Decision-Making in Organizations. Jossey-Bass Publishers. San Fransico, CA, 1986.
- Inhofe, James. "Crusader is vital weapon", USA Today, May 15, 2002. Available from <<http://www.usatoday.com/news/comment.htm>>. Internet. Accessed 5 November 2002.
- Jonson, Nick. "Developing a Crusader replacement poses high risks," Aerospace Daily, August 13, 2002. Available from <<http://www.globalsecurity.org/org/news/2002/020813-fcs.htm>>. Internet. Accessed on 15 January 2003.

- Kauchak, Marty. "Crusader survivability uncertain: Next-generation howitzer may meet match on the Hill." Armed Force Journal International, volume 138, number 10, May 2002, 16.
- Kennedy, Harold. "Army ponders alternatives to Crusader gun system." National Defense, volume 87, number 586. September 2002, 31-32. Database on-line. Available from AULIMP. Accessed 15 October 2002.
- Leibstone, Marvin. "Crusader for Crusader: "Politics, politics, politics". Military Technology. 2002. Volume 26.
- Leyden, Andrew. "Gulf War Debriefing Book, An After Action Report". Available from <<http://www.leyden.com/gulfwar/>>. Internet. Accessed on 15 September 2002.
- Matsumura, John, Randall Steeb, and John Gordon. Assessment of Crusader: the Army's next self-propelled howitzer and resupply vehicle. Rand Corporation, Santa Monica, CA, 1998
- McCaffrey, Barry. "Bring back the Crusader system", NucNews, 31 May 2002. Available from <<http://prop1.org/nucnews/2002nn/0205nn/0205.htm>>. Internet. Accessed on 5 November 2002.
- Naylor, Sean D. "Collision over Crusader." Army Times, volume 62, number 44, May 27, 2002, 10-11.
- Naylor, Sean D. "Crusader fallout." Army Times, volume 63, number 4, August 19, 2002, 12.
- Naylor, Sean D. "Crusaders get in line with vision of lighter force." Army Times, volume 60, number 33, March 13, 2000, 22.
- Naylor, Sean D. "Under DoD's gun: Army in middle of Crusader battle." Army Times, volume 62, number 47, June 17, 2002, 16.
- Naylor, Sean. "Crusader lessons loom large as leaders try to save Comanche." Army Times, volume 63, number 2, August 5, 2002, 24.
- Official biography for Chief of Staff of the Army Eric K. Shinseki. Available from <<http://www.army.mil/leaders/csa/bio.html>>. Internet. Accessed on 15 September 2002
- Official biography for Secretary of the Army Thomas E. White. Available from <<http://www.army.mil/leaders/secarmy/bio.html>>. Internet. Accessed on 15 September 2002
- Po, Enrico. "Crusader: The future of SP (self-propelled) artillery according to the US Army." Military Technology, volume 24, number 11, 2000, 55-60.

Roos, John G. "Rolling Thunder: Despite deep cuts in Crusader program, artillery modernization retains its momentum." Armed Forces Journal International, volume 138, number 5, December 2000, 16.

"Rummy Rumbles with Army Brass", CBSNEWS.com, 3 May 2002. Available from <<http://www.cbsnews.com/stories/2002/05/07/national/news508198.shtml>>. Internet. Accessed on 20 November 2002.

"Rumsfeld Defends Termination of Crusader Artillery System", U.S. Department of State: International Information Programs, 19 May 2002. Available from <<http://usinfo.state.gov/regional/nea/sasia/afghan.htm>>. Internet. Accessed on 19 September 2002.

"Rumsfeld dumps Crusader, defends decision", Inside Politics, 9 May 2002. Available from <<http://www.cnn.com/2002/allpolitics/05/08/rumsfeld.crusader>>. Internet. Accessed on 21 November 2002.

Sherman, Jason. "Army seeks Crusader alternatives." Army Times, volume 62, number 43, May 20, 2002, 8-9.

Sherman, Jason. "Crusade against Crusader?" Army Times, volume 62, number 42, May 13, 2002, 8.

Statement by GEN Eric K. Shinseki, Chief of Staff, U.S. Army before the Committee on Armed Services, U.S. Senate on the Crusader Self-Propelled Howitzer Program, May 16, 2002. Available from <<http://www.army.mil/leaders/csa/testimony.htm>>. Internet. Accessed on 18 September 2002.

Testimony by Secretary of Defense Donald H. Rumsfeld on Crusader Artillery System, May 16, 2002. Available from <<http://www.defenselink/speeches/2002-secdef2.html>>. Internet. Accessed on September 12, 2002.

Testimony by Undersecretary of Defense Aldridge on Crusader Artillery System, May 16, 2002. Available from <<http://www.defenselink/speeches/2002-secdef2.html>>. Internet. Accessed on September 12, 2002

Tiboni, Frank "Officials see new role for embattled Crusader." Army Times, volume 61, number 52, July 2001, 31.

Tiboni, Frank "Rushing Crusader to troops may save it from cuts." Army Times, volume 61, number 46, June 11, 2001, 31.

Tiboni, Frank. "Army report: Less bang, more bucks to scrap Comanche." Army Times, volume 62, number 47, June 17, 2002, 10.

United States Army Weapon System Book, 2002, 238-239.

U.S. General Accounting Office. Army armored systems: meeting Crusader requirements will be a technical challenge; report to the Secretary of Defense. Washington, D.C.: U.S. General Accounting Office, 1997.

Willingham, Stephen. "Crusader on warpath to regain relevancy in future Army." National Defense, volume 84, number 559, June 2000, 16-18.

Wolf, Jim. "Rumsfeld Kills Army's Crusader Big Gun", Reuters, May 8, 2002.